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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/974,919	10/10/2001	Gregory K. Woods	000153	1081

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Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER	
RYMAN, DANIEL J	

ART UNIT	PAPER NUMBER
2665	8

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/974,919	WOODS ET AL.	
	Examiner	Art Unit	
	Daniel J. Ryman	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 3/19/2004 have been fully considered but they are not persuasive. On page 6 of the Response, Examiner argues that Mu does not disclose that the cross-bar switch is implemented with a plurality of digital buffers since Mu only discloses that each data port has a data buffer. Examiner, respectfully, disagrees. The term "implement" means "to give practical effect to". As such, Examiner has interpreted the limitation "wherein said cross-bar switch is implemented with a plurality of digital buffers" to mean that the switch uses digital buffers in order to properly function rather than Applicant's interpretation that the switch comprises digital buffers. Given Examiner's reasonable interpretation of the claim language, Examiner maintains that Mu teaches the aforementioned limitation since Mu uses the digital buffers in order to store information in a cross-bar switching system until a connection can be completed.

2. Given the above arguments, Examiner maintains the rejection of the claims. Applicant is urged to add additional limitations to the claims in order to distinguish the claims from the prior art.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, and 4-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer (USPN 5,933,449) in view of Mu et al (USPN 5,991,296).

5. Regarding claim 1, Meyer discloses an apparatus for selectively interconnecting a plurality of ports (ref. 10a-n), comprising: a cross-bar switch (ref. 18)), having a plurality of bi-directional data ports (ref. 10a-n), and a controller (ref. 38), operable to control said cross-bar switch to interconnect any two of said plurality of bi-directional data ports (col. 3, line 49-col. 4, line 55). Meyer does not expressly disclose that the cross-bar switch is implemented with a plurality of digital buffers. Mu teaches, in a crossbar switch, that the crossbar switch is implemented with a plurality of digital buffers in order to store data until a connection in the switch can be completed (col. 1, line 65-col. 2, line 51 and col. 4, lines 25-64). It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the cross-bar switch with a plurality of digital buffers since buffers are well known means to store information in a cross-bar switch until a connection can be completed.

6. Regarding claim 2, referring to claim 1, Meyer in view of Mu discloses that the plurality of bi-directional ports are adapted to interconnect RS-232 ports (Meyer: col. 12, line 59-col. 13, line 15).

7. Regarding claims 4 and 11, Meyer discloses an apparatus, comprising: first, second, and third interfaces each having an input and an output (ref. 10a-n and col. 3, line 49-col. 4, line 55) where n=3; an interface controller having a first, second, and third control outputs (ref. 38), and operable to enable any one of said outputs individually (ref. 38; col. 2, line 56-col. 3, line 28; col. 4, line 45-55; and col. 14, lines 48-67); a control input wherein said control inputs enable and disable the coupling of signals through said interface (ref. 38; col. 2, line 56-col. 3, line 28; col.

4, line 45-55; and col. 14, lines 48-67). Meyer does not expressly disclose a first, second, third, fourth, fifth, and sixth buffer, each having an input, an output, and a control input, and wherein said control inputs enable and disable the coupling of signals through said buffers, and wherein said output of said first and second buffers are coupled to said input of said first interface; said outputs of said third and fourth buffers are coupled to said input of said second interface; said outputs of said fifth and sixth buffers are coupled to said input of said third interface; said output of said first interface is coupled to said input of said fourth and fifth buffer; said output of said second interface is coupled to said inputs of said first and sixth buffers; said output of said third interface is coupled to said inputs of said second and third buffers; said first control output is coupled to said control inputs of said first and fourth buffers; said second control output is coupled to said control inputs of said third and sixth buffers, and said third control output is coupled to said control inputs of said second and fifth buffers. Mu teaches, in a crossbar switch, that the crossbar switch is implemented with a plurality of digital buffers, each port containing one buffer for each of the outputs, in order to store data until a connection in the switch can be completed (col. 1, line 65-col. 2, line 51 and col. 4, lines 25-64). Meyer in view of Mu suggests having a control input on each of the buffers in order to enable or disable the flow of information from each of the buffers. It would have been obvious to one of ordinary skill in the art at the time of the invention to have buffers with an input, an output, and a control input arranges such that each port has a buffer for each of the destination ports since buffers are well known means to store information in a cross-bar switch until a connection can be completed.

8. Regarding claims 5 and 12, referring to claims 3 and 11, Meyer in view of Mu discloses means for disabling said control inputs sets said outputs of said buffers to a high impedance state

(Meyer: ref. 37; col. 2, line 56-col. 3, line 28; col. 4, line 45-55; and col. 14, lines 48-67 and Mu: col. 1, line 65-col. 2, line 51 and col. 4, lines 25-64), and wherein said interface controller is operable to disable all of said control outputs (Meyer: ref. 37; col. 2, line 56-col. 3, line 28; col. 4, line 45-55; and col. 14, lines 48-67).

9. Regarding claims 6 and 13, referring to claims 3 and 11, Meyer in view of Mu discloses that the interfaces are serial port interfaces (Meyer: col. 12, line 59-col. 13, line 15).

10. Regarding claims 7 and 14, referring to claims 6 and 13, Meyer in view of Mu discloses that the serial port interfaces are RS-232 serial port interfaces (Meyer: col. 12, line 59-col. 13, line 15).

11. Regarding claims 8 and 15, referring to claims 6 and 13, Meyer in view of Mu discloses that the output of said serial port interface is a transmit data output, and said input of said serial port interface is a receive data input (Meyer: col. 12, line 59-col. 13, line 67).

12. Regarding claims 9 and 16, referring to claims 7 and 14, Meyer in view of Mu discloses that the output of said serial port interface is a request to send output, and said input of said serial port interface is a clear to send input (Meyer: col. 12, line 59-col. 13, line 67).

13. Regarding claims 10 and 17, referring to claims 4 and 11, Meyer in view of Mu discloses that the interface controller is incorporated into one of said interfaces (Meyer: col. 4, lines 53-55).

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DJR

Daniel J. Ryman
Examiner
Art Unit 2665

STEVEN H.D NGUYEN
PRIMARY EXAMINER